

# PATENT ABSTRACTS OF JAPAN

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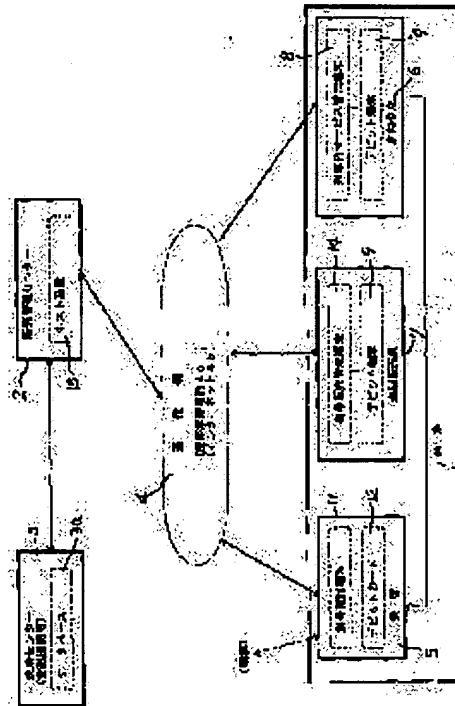
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## (54) TRAIN SALES SERVICE SYSTEM

### (57)Abstract:

PROBLEM TO BE SOLVED: To provide a train sales service system allowing customers to buy desired commodities while seated in a train and allowing a seller to efficiently sell the commodities.

SOLUTION: This train sales service system is provided with a host device 13 receiving the order data transmitted from portable radio terminals 4a held by the customers 5 in the train 1 and transmitting the order data to a train stall 6, a train service management terminal 8 installed in the train stall 6 and receiving and displaying the order data transmitted from the host device 13 for commodity management, and a sales management center 2 recording and managing the orders received from the portable radio terminals 4a for liquidation processing. Passengers 5 order commodities from their seats and can receive the commodities delivered to their seats while being seated. The seller can efficiently perform commodity management including the orders from the customers 5 with a computer (host device 13) in the lump on a real- time basis.



**LEGAL STATUS**

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**CLAIMS****[Claim(s)]**

[Claim 1] The host equipment which receives the order data transmitted from the walkie-talkie terminal which the customer in a train owns, and transmits this order data to the stand in said train, The service administration terminal in a train which receives and displays the order-received data which were installed in the stand in said train and transmitted from said host equipment, and performs merchandise management, The selling service system in a train characterized by what the order received from said walkie-talkie terminal was recorded and managed, and it had a settlement-of-accounts processing means to perform settlement-of-accounts processing for.

[Claim 2] The numbered passenger car number of the car with which the customer has taken the order data transmitted to said host equipment from said walkie-talkie terminal and the seat number, an order name of article and quantity, and the selling service system in a train according to claim 1 characterized by including the settlement-of-accounts approach data.

[Claim 3] The selling service system in a train given in either of claims 1 or 2 characterized by including a cash basis in the settlement-of-accounts art by said settlement-of-accounts processing means.

[Claim 4] The selling service system in a train according to claim 1 characterized by having the wireless terminal which can read the card information for settling accounts as said settlement-of-accounts processing means using a card.

[Claim 5] The selling service system in a train according to claim 4 characterized by said card being a debit card in which real-time settlement is possible.

[Claim 6] The selling service system in a train according to claim 4 characterized by said card being a credit card.

[Claim 7] The selling service system in a train given in either of claims 1-5 characterized by using a portable telephone as said walkie-talkie terminal.

[Claim 8] The selling service system in a train according to claim 1 or 2 characterized by carrying out by a pocket communication link wireless firm executing by proxy as said payment system.

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Field of the Invention] This invention can obtain desired goods, while the PAX (henceforth a "customer") had sat down within the train, and a vender side is related with the selling service system in a train which can perform goods sale efficiently.

**[0002]**

[Description of the Prior Art] For example, in addition to installation of a stand in the car, by trains, such as the Shinkansen of JR, the approach a missionary salesman puts goods on a wagon and sells them is also performed. However, when busy, not turning easily does not have few missionary salesmen, either. In such a case, although it is necessary to go to a stand in the car directly, and to purchase, when it sits down troublesome when the distance to a stand in the car is separated by the window in a seat like three-person credit, a seat cannot be easily stood on those who are sitting down next using mind. In such a case, it had to wait for a missionary salesman to turn.

**[0003]**

[Problem(s) to be Solved by the Invention] As mentioned above, it waited for a missionary salesman to turn, or the customer could not but go out directly to the stand in the car, and it could not but go by selling service in the conventional train. However, by this approach, when it sat down troublesome when the distance to a stand in the car is separated by the window in a seat like three-person credit, there was a trouble that it had to wait to be unable to stand but for a missionary salesman to travel a seat very much. Moreover, in the conventional sales aboard a train, although management was carrying out sales management by computer, it was not that from which information is acquired by real time about a selling situation. For this reason, there was also a trouble that merchandise management was troublesome.

**[0004]** It was made in order that this invention might solve such a problem, the purpose can obtain desired goods, while the customer had sat down within the train, and a vender side offers the selling service system in a train which can perform goods sale efficiently.

**[0005]**

[Means for Solving the Problem] The host equipment which the selling service system in a train of this invention receives the order data transmitted from the walkie-talkie terminal which the customer in a train owns, and transmits this order data to the stand in said train, The order-received data which were installed in the stand in said train and transmitted from said host equipment are received and displayed, the order received from the service administration terminal in a train which performs merchandise management, and said walkie-talkie terminal is recorded and managed, and it has the configuration equipped with a settlement-of-accounts processing means to perform settlement-of-accounts processing. Desired goods can come to hand the PAX ordered goods from his seat, had you send to his seat, and sat down by this configuration. On the other hand, a vender side bundles up with host equipment, is efficient and, moreover, can carry out merchandise management including the order from the PAX to real time.

[0006] Moreover, it is made for the selling service system in a train of this invention to contain the numbered passenger car number and the seat number, the order name of article and quantity, and settlement-of-accounts art data of the train by which the customer has got on in the order data transmitted to said host equipment from said walkie-talkie terminal. According to this, processing from the delivery of goods after receiving an order to settlement of accounts can be advanced smoothly.

[0007] Moreover, it is made for the selling service system in a train of this invention to also include a cash basis as settlement of accounts by said settlement-of-accounts processing means. Since the customer who demands a cash basis can settle in cast basis according to this, it contributes to the improvement in service.

[0008] Moreover, the selling service system in a train of this invention is considered as the configuration equipped with the wireless terminal which can read the card information for settling accounts using a card as settlement of accounts by said settlement-of-accounts processing means. Since the customer who demands pay by card can pay by card using the wireless terminal which can read card information according to this, it contributes to the improvement in service.

[0009] Moreover, it is made for the selling service system in a train of this invention to contain a debit card as a card used by pay by card. According to this, real-time settlement becomes possible using a debit card, and it contributes to the improvement in service.

[0010] Moreover, it is made for the selling service system in a train of this invention to contain a credit card as a card used by pay by card. According to this, the settlement of accounts which uses a credit card is attained, and contributes to the improvement in service.

[0011] Moreover, a portable telephone is used for the selling service system in a train of this invention as said walkie-talkie terminal. According to this, an order can be easily placed by using the cellular phone which has spread widely as means of communications.

[0012] Moreover, as said payment system, a pocket communication link wireless firm executes the selling service system in a train of this invention by proxy, and it is made to perform it. According to this, since accounts can be settled together with a cellular-phone tariff etc., settlement-of-accounts processing becomes easy and contributes to the improvement in service.

[0013]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained using a drawing. Drawing 1 is the block diagram of the selling service system in a train. In drawing 1, this selling service system in a train is equipped with the communication network 4 which connects on radio the settlement-of-accounts pin center,large 3 used by pay by card using the debit card as a means to settle a train 1, the sales management pin center,large 2 which has managed the goods sold within that train 1, and the goods sold within a train 1, a credit card, etc., and 1 in a train and the sales management pin center,large 2. In addition, goods here are not restricted only to the goods dealt in, and pay services, such as vicarious execution sending of facsimile, are also included. Moreover, the approach which used a credit card and other cards besides the debit card is possible as a means which pays by card. However, with the gestalt of this operation, if it is in pay by card, the case where a debit card 12 is used is explained as an example. Therefore, in this invention, if it is in pay by card, it is not the thing using a debit card 12 limited to paying.

[0014] A communication network 4 includes service of Internet 4b which is the communication service for which the portable radiotelephone contractor used service and satellite communication of portable radiotelephone 4a which is carrying out service provision etc. Moreover, as communication service of portable radiotelephone 4a, there is service of the portable radiotelephone known in NTT DoCoMo, other communication links or network firms, etc., for example, and they are an I mode and EZ by such communication service in addition to the usual communication link. Use of the telephone settlement of accounts which used Web or J-sky service, the DEBITTO settlement of accounts which used DoPa service is attained.

[0015] The settlement-of-accounts pin center,larges 3 are financial institutions, such as a bank and a consumer credit company, and database 3a which manages a customer's 5 data is installed. Moreover, in this settlement-of-accounts pin center,large 3, cards are published by the prior contract with a customer

5, and the settlement of accounts using those cards is enabled.

[0016] On the train 1, the missionary salesman 7 who stands 6 in the car which serves goods sale is established in the customer 5, and puts goods on a wagon, and walks to sell to a customer's 5 seat crews. The service administration terminal 8 in a train and the DEBITTO terminal 9 are installed in the stand 6 in the car, and with the wagon which carried goods, a missionary salesman 7 possesses the pocket sales management terminal 14 and the DEBITTO terminal 9, and does round sale of the inside of a train.

[0017] The customer 5 who is going to receive the selling service in a train prepares the cellular-phone terminal 11, cash, or a debit card 12, and rides on a train 1. And in this invention, although various kinds of selling services within a train 1 can be received, the flow of the processing changes with approaches of settling accounts. Hereafter, an all directions method is explained in order of examples 1-4.

[0018] (The 1st example) Drawing 2 is a flow chart in case a customer 5 purchases goods in cash within a train 1. Although there are an approach of a customer 5 going to the stand 5 in the car directly, and purchasing as an approach in case a customer 5 purchases goods in cash within a train 1, and the approach of purchasing directly from a missionary salesman 7 at a seat, two arts are fundamentally the same. Here, the case where a customer 5 goes to the stand 6 in the car directly, and it purchases is explained. In drawing 2, if a customer 5 purchases goods in cash in the stand 6 in the car (step ST 1), a dealer member will input the sold trade name, quantity, the amount of money, etc. into the service administration terminal 8 in a train put on the stand 6 in the car. The sales data inputted here is sent to the host equipment 13 which is the computer of the sales management pin center, large 2 through a communication network 4 from the service administration terminal 8 in a number train with the format and terminal identification ID (terminal number) of the train (step ST 2). In the sales management pin center, large 2, the sales data is memorized to host equipment 13 with terminal identification ID (step ST 3). Sales data is totaled, and it displays on the display in the sales management pin center, large 2 on real time, and selling information etc. is transmitted to other numbered passenger cars, and it provides for coincidence as information (step ST 4). In other numbered passenger cars, it refers to the information, and the goods exhibited to a stand in the car are changed, or it is made reference of the goods which a missionary salesman 7 put and carries to a wagon vehicle. In addition, if the goods which the missionary salesman 7 sold in cash input the trade name which the missionary salesman 7 sold, quantity, the amount of money, etc. into the pocket sales management terminal 14 which the missionary salesman 7 possesses, the sales data will be sent to the host equipment 13 of the sales management pin center, large 2 through a communication network 4 like the case of the service administration terminal 8 in a train with the format and terminal identification ID of the train. In the sales management pin center, large 2, the sales data is memorized to host equipment 13, it sells to coincidence, data are totaled and it displays on the display in the sales management pin center, large 2 on real time, and other numbered passenger cars are provided with selling information etc. as information, and it can display now on the display which the service administration terminal 8 in a train of each stand 6 in the car does not illustrate.

[0019] (The 2nd example) Drawing 3 is a flow chart in case a customer 5 settles accounts within a train 1 using a debit card 12. In drawing 3, when the settlement of accounts by the debit card 12 is required from a customer 5, settlement-of-accounts processing is performed using the DEBITTO terminal 9 which the DEBITTO terminal 9 or missionary salesman 7 assigned in the stand 6 in the car possesses. the personal identification number (ID number) from the ten key which a customer 5 will insert a debit card 12 in the card reader section which the DEBITTO terminal 9 does not illustrate, and will not be illustrated if it explains [\*\*\*\*\*] when carrying out settlement-of-accounts processing here using the DEBITTO terminal 9 which a missionary salesman 7 possesses -- it pays and the amount of money is inputted (steps ST20 and ST21). At the DEBITTO terminal 9, when in agreement with the inputted ID number and the ID number of a debit card 12, delivery and when not in agreement, use is refused for the data of the amount of money inputted from the data read from the debit card 12, or a ten key to the pocket sales management terminal 14, (step ST 22). As for the data sent to the pocket sales management terminal 14, the format of the train and terminal identification ID (terminal number), the sold trade name, quantity, etc. are sent to the host equipment 13 of the sales management pin center, large 2 through the pocket sales management terminal 14 and a communication network 4 with the ID number

and the amount of money of a debit card 12 (step ST 23). The sales management pin center,large 2 requires delivery, collating, and settlement of accounts of the settlement-of-accounts pin center,large 3 for an ID number and the inputted amount of money (step ST 24). The settlement-of-accounts pin center,large 3 stores temporarily these settlement-of-accounts demands at database 3a, and performs collating and real-time settlement processing (steps ST [ ST25 and ] 25-2). When settlement-of-accounts processing cannot be performed, the settlement-of-accounts pin center,large 3 notifies the handling refusal to the sales management pin center,large 2, and completes processing (step ST 25-2). Moreover, when the settlement-of-accounts processing is refused, the sales management pin center,large 2 directs refusal of delivery and settlement-of-accounts processing to the pocket sales management terminal 14 with which a missionary salesman 7 possesses the data. On the other hand, when settlement-of-accounts processing is completed, the notice of the purport which settlement-of-accounts processing completed is taken out from the settlement-of-accounts pin center,large 3 to the sales management pin center,large 2 (step ST 26). Then, in the sales management pin center,large 2, it tells that settlement-of-accounts processing was completed to a missionary salesman's 7 pocket sales management terminal 14, and, thereby, a missionary salesman 7 delivers goods to a customer 5 (step ST 27). If goods are received and passed to a customer 5, it will be told to the sales management pin center,large 2 through a missionary salesman's 7 pocket sales management terminal 14 and communication network 4 (step ST 28). In the sales management pin center,large 2, the information on the trade name, quantity, the amount of money, and the pocket sales management terminal 14 etc. is recorded on host equipment 13, and the sales data is totaled to coincidence, and it displays on the display in the sales management pin center,large 2 on real time, and other numbered passenger cars are provided with selling information etc. as information (steps ST29 and ST30). The information is displayed on the display which the service administration terminal 8 in a train of each stand 6 in the car does not illustrate. In addition, the pocket sales management terminal 14 which settlement-of-accounts processing completed ends this processing for one affair, and goes to the next processing.

[0020] (The 3rd example) A customer 5 is portable radiotelephone 4a from his seat etc., and drawing 4 is a flow chart in the case of using substitute pin center,larges, such as I mode service of for example, NTT DoCoMo, as means of communications and a payment system, and purchasing goods. [ in a train 1 ] In drawing 4 , a customer 5 connects with a substitute pin center,large first using the cellular-phone terminal 11 (step ST 31). Then, the menu of a substitute pin center,large is opened, the homepage of the sales management pin center,large 2 is accessed from a menu list, and order data are inputted according to the procedure displayed on the homepage (steps ST32, ST33, and ST34). Here, the goods to order, quantity, and the amount of money are inputted as a password, the number of numbered passenger cars, and the seat number. Either the input of a trade name or the input of a quotient lot number number is OK as goods, and they are good also as what carries out automatic conversion of the quotient lot number number from a trade name within a cellular-phone terminal. This input data is sent to the sales management pin center,large 2, and, as for the right case, a password is received (a step ST 35, a step ST 36). In the sales management pin center,large 2, it sends to the service administration terminal 8 in a train installed in the stand 6 of a numbered passenger car in the car where the received number of numbered passenger cars, the seat number, the telephone number, order goods, quantity, etc. correspond as order data (step ST 36). In the stand 6 in the car which received the data, the corresponding goods are carried to the seat of the customer 5 who placed an order, and it hands to a customer 5, and a reception sign is got. Then, in the stand 6 side in the car, it delivers to the sales management pin center,large 2 through the service administration terminal 8 in a train, and a communication network 4, and completion data are notified (step ST 37). Then, in the sales management pin center,large 2, the notice of completion is notified to a substitute pin center,large (step ST 38). Then, a substitute pin center,large adds the amount of money which purchased goods to the phonecall charges which the customer 5 used, asks a cellular-phone contractor for a tariff, and completes telephone settlement of accounts. The part which the tariff which this substitute pin center,large collected deducted predetermined tariffs, such as a commission, and remained is paid for the sales management pin center,large 2. On the other hand, in the sales management pin center,large 2, the information on the trade name, quantity, the amount of money,

and the pocket sales management terminal 14 etc. is recorded on host equipment 13, the sales data is totaled to coincidence, and it displays on the display in the sales management pin center,large 2 on real time, and other numbered passenger cars are provided with selling information etc. as information (steps ST39 and ST40). The information is displayed on the display which the service administration terminal 8 in a train of each stand 6 in the car does not illustrate.

[0021] (The 4th example) The customer 5 of drawing 5 is portable radiotelephone 4a from his seat etc., and settlement of accounts is a flow chart in the case of performing the settlement of accounts which used cash or pay by card (here debit card 12). [ in a train 1 ] In the flow chart of drawing 5 , first, a customer 5 uses the cellular-phone terminal 11, telephones the sales management pin center,large 2 through a communication network 4 (step ST 51), and orders goods from the operator of the sales management pin center,large 2 (step ST 52). Here, in addition to the number of numbered passenger cars, the seat number, an identifier and the telephone number, the goods to order, and quantity, the settlement-of-accounts approach (here, it becomes pay by card and a cash basis) of a tariff is told. If an order and the settlement-of-accounts approach are decided, a customer 5 will hang up a telephone. On the other hand, in addition to the received number of numbered passenger cars, the seat number, an identifier, the telephone number, the goods that received the order, and quantity, the sales management pin center,large 2 sends the settlement-of-accounts approach of a tariff to the service administration terminal 8 in a train of the stand 6 of the corresponding train 1 in the car as goods order data (step ST 53). In the stand 6 in the car which received the data, the corresponding goods are carried to the seat of the customer 5 who placed an order, and accounts is settled according to the settlement-of-accounts approach received at the time of an order, and if settlement of accounts is completed, goods will be passed to a customer 5. Moreover, if delivery and settlement-of-accounts processing of goods are completed, the goods delivery and the completion report of settlement of accounts will be performed to the sales management pin center,large 2 through the service administration terminal 8 in a train, and a communication network 4, and processing will be completed (step ST 54). In addition, among the settlement-of-accounts approaches, a cash basis is exchange to goods and cash, and pay by card is processed like the processing explained in the above-mentioned example 2 using the DEBITTO terminal 9 which a missionary salesman 7 possesses. Moreover, in the sales management pin center,large 2 which received communication of the completion of goods selling, the information on the trade name, quantity, the amount of money, and the pocket sales management terminal 14 etc. is recorded on host equipment 13, and the sales data is totaled to coincidence, and it displays on the display in the sales management pin center,large 2 on real time, and other numbered passenger cars are provided with selling information etc. as information (steps ST55 and ST56). The information is displayed on the display which the service administration terminal 8 in a train of each stand 6 in the car does not illustrate.

[0022]

[Effect of the Invention] As explained above, since a customer (PAX) can order goods by telephone from his seat and can have you send to his seat when a missionary salesman does not turn easily within a train, easy acquisition of the desired goods can be carried out with the selling service system in a train of this invention, sat down. Moreover, since settlement of the sent goods and settlement of accounts by telephone which used the pay by card which used the debit card and the credit card in addition to cash, I mode service, etc. are attained, improvement in service can be aimed at. On the other hand, a vender side will bundle up merchandise management including the order from a customer by computer (host equipment), and can expect the outstanding effectiveness that it is efficient, and merchandise management etc. becomes easy since it can moreover carry out to real time.

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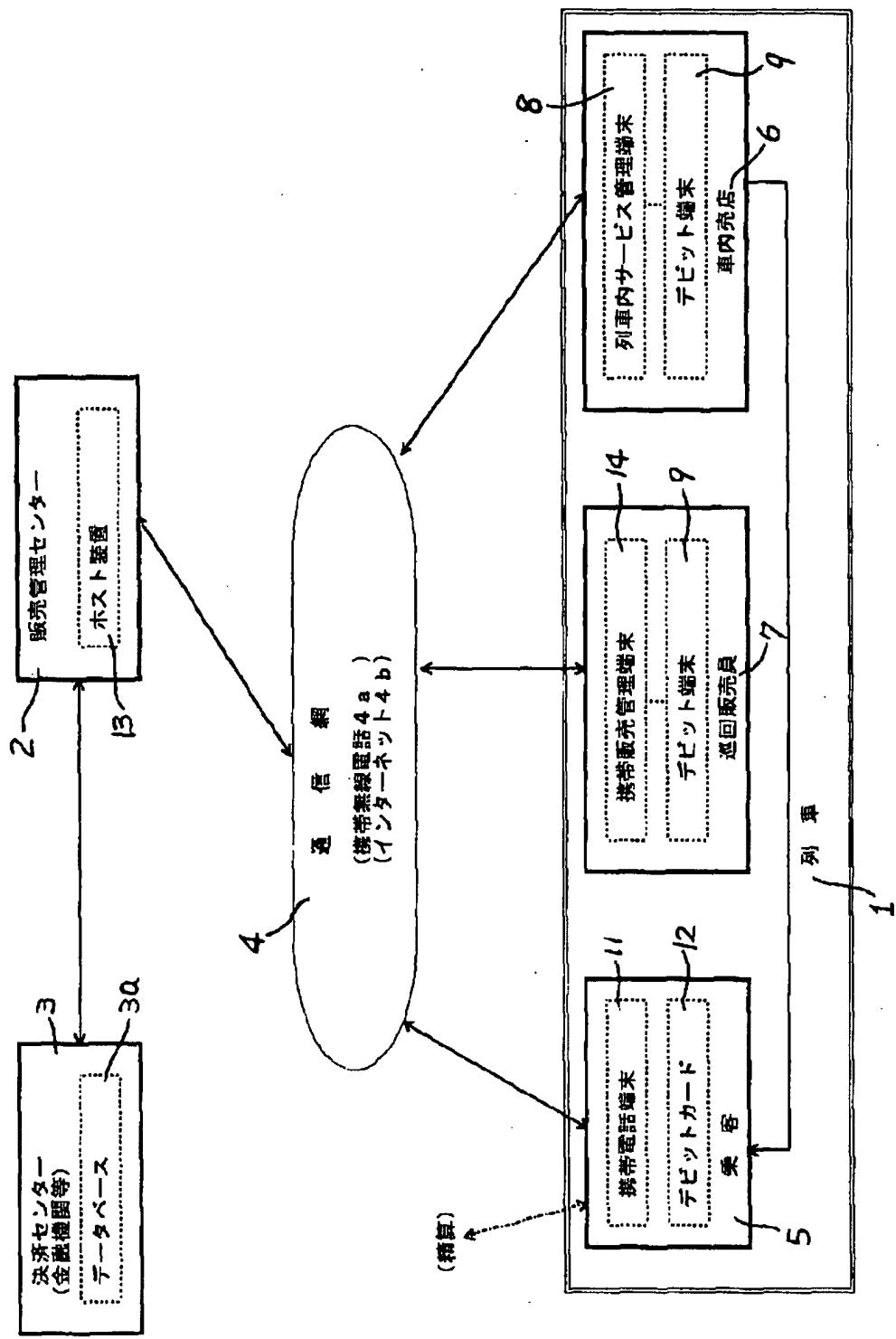
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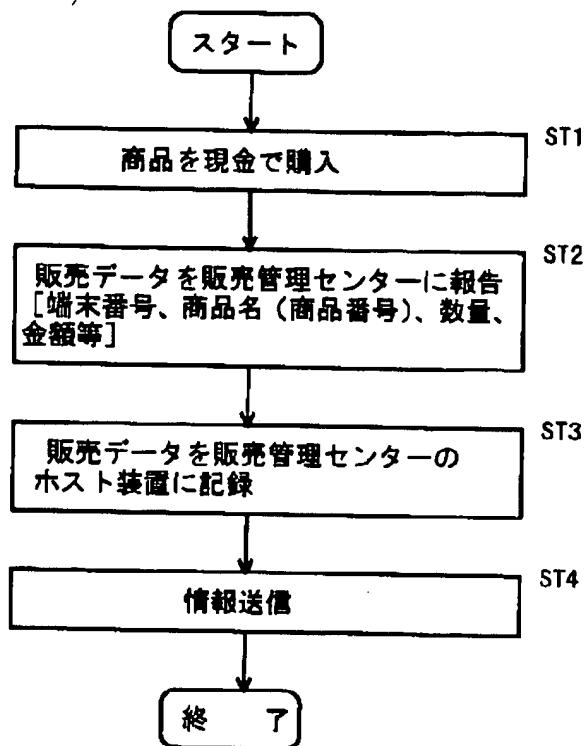
**DRAWINGS**

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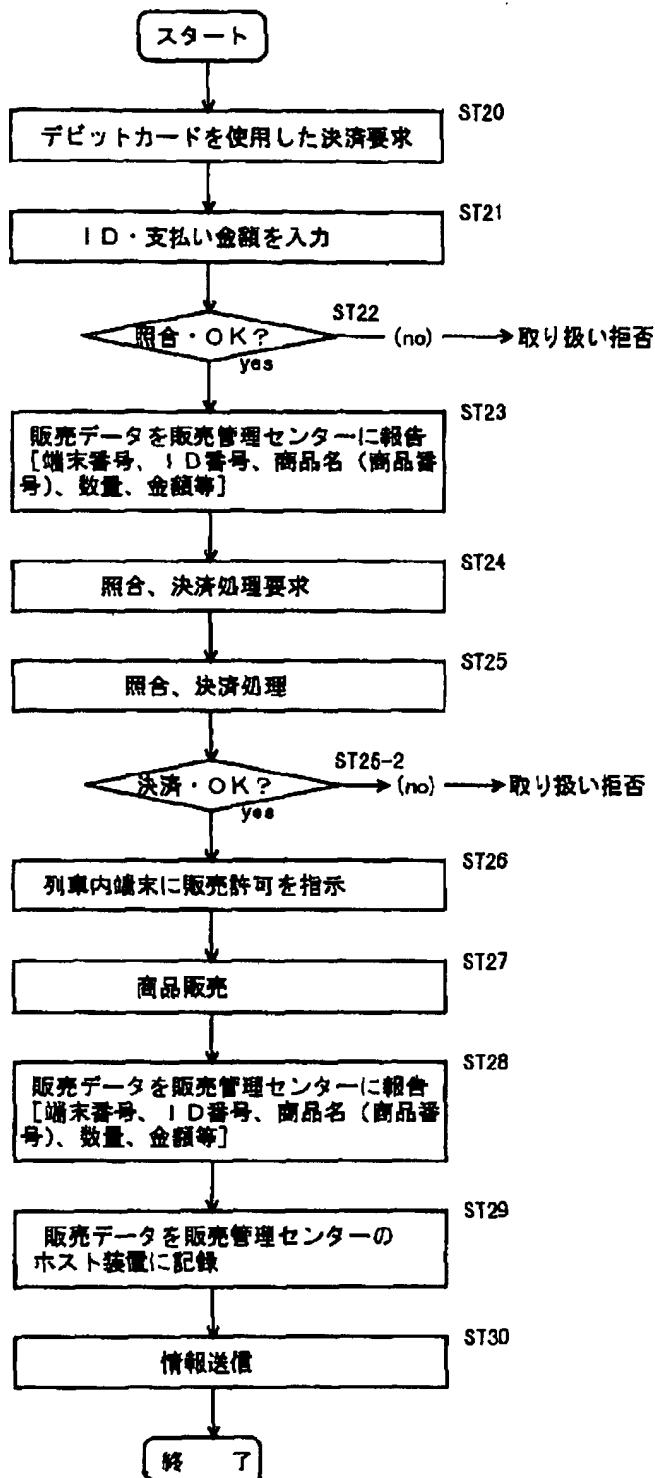
[Drawing 1]



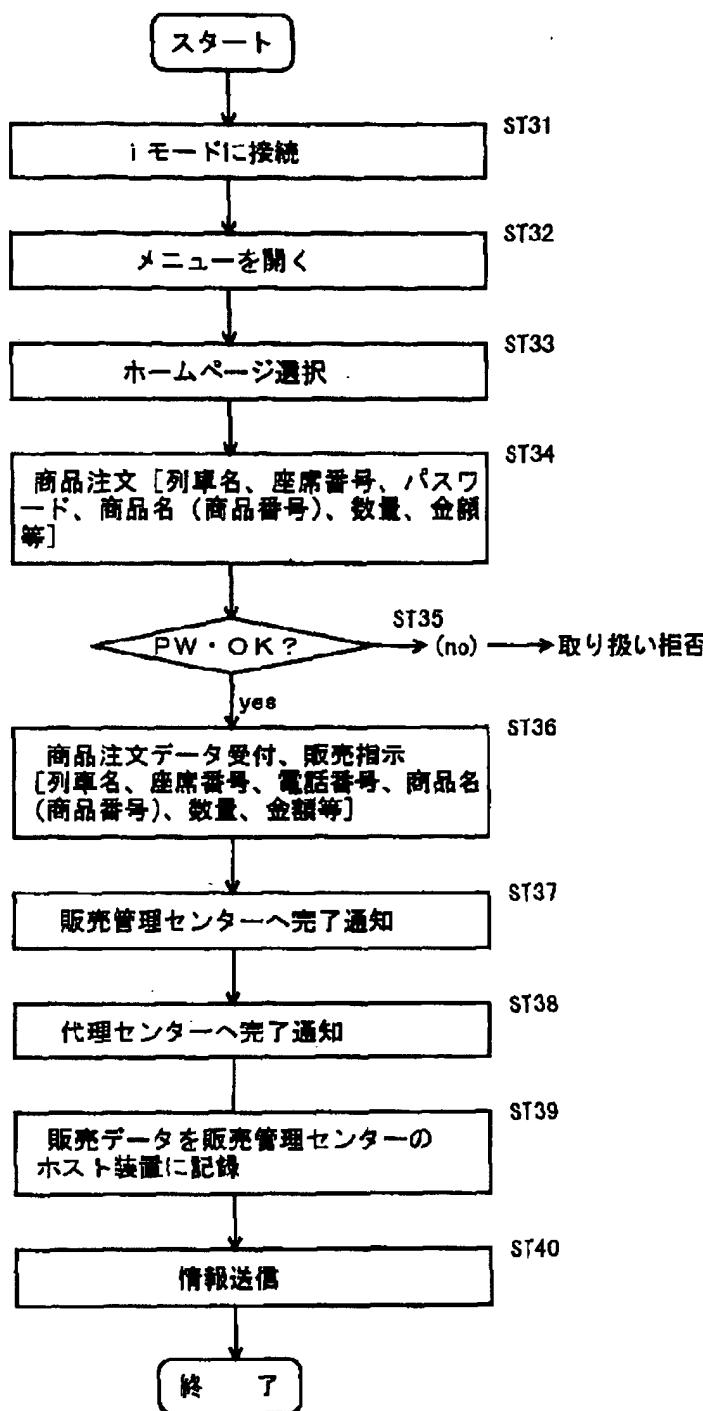
[Drawing 2]



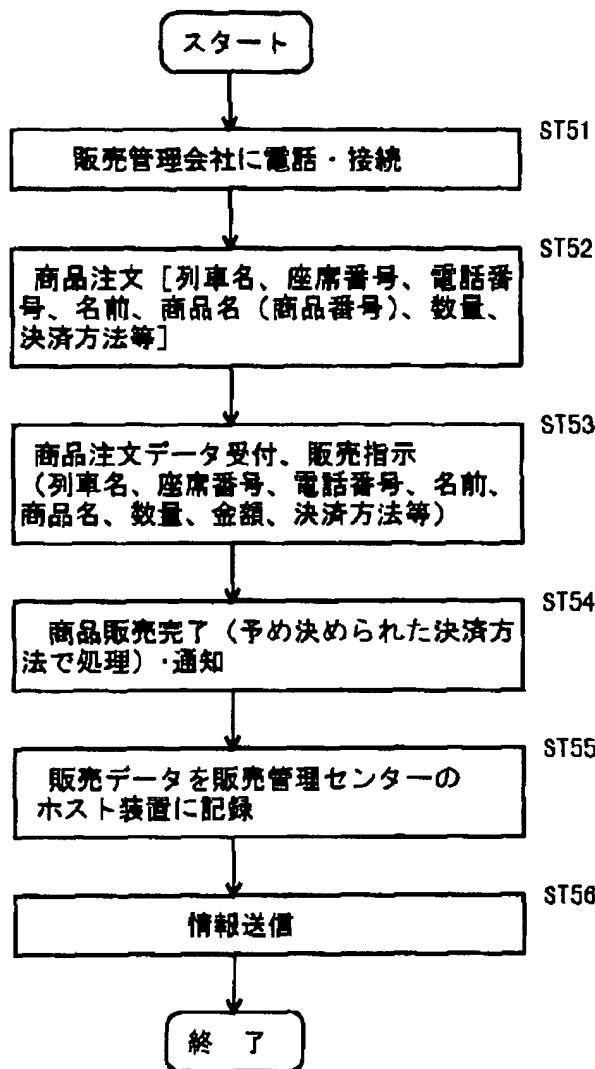
[Drawing 3]



[Drawing 4]



[Drawing 5]



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